FlyBy Math™ Alignment
Academic Standards: Mathematics

Content Standard 1.0: Number and Operations

Students will recognize, represent, model, and apply real numbers and operations verbally, physically, symbolically, and graphically and will compute fluently and make reasonable estimates in problem solving.

Learning Expectations	***FlyBy Math*™ Activities**
1.9 use real numbers to represent real-world applications (e.g., rate of change, probability, and proportionality);	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Interpret the slope of a line in the context of a distance-rate-time problem.

Content Standard 2.0 Algebra

Students will describe, extend, analyze and create a wide variety of patterns and solve real-world problems using appropriate representations.

Learning Expectations	***FlyBy Math*™ Activities**
2.2 analyze mathematical patterns related to algebra and geometry in real-world problem solving;	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
2.7 interpret graphs that depict real-world phenomena;	--Interpret the slope of a line in the context of a distance-rate-time problem. --Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
2.8 model real-world phenomena using graphs.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Content Standard 3.0 Geometry

The student will investigate, model, and apply geometric properties and relationships.

Learning Expectations	***FlyBy Math*™ Activities**
3.2 apply geometric properties, formulas, and relationships to solve real-world problems.	--Use the distance-rate-time formula to predict and analyze aircraft conflicts.

3.4 communicate position using spatial sense with two-dimensional coordinate systems;	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

Content Standard 4.0 Measurement	
Students will become familiar with the units and processes of measurement in order to use various tools, techniques, and formulas to determine and estimate measurements in problem solving.	
Learning Expectations	***FlyBy Math*™ Activities**
4.5 demonstrate an understanding of rates and other derived and indirect measurements (e.g., velocity, miles per hr, rpm, and cost per unit.).	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.